



## Advanced uses of Earned Value Management (EVM)

### *An Extended model for Program and Portfolio Management*

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Performance measurement is nowadays commonly accepted as a general best practice in Project Management. The most commonly used and recommended tool to implement performance monitoring systems in project environments is the Earned Value Management (EVM) method. As a consequence, EVM has been recently the focus of much attention in the international market, especially in organizations whose business model is based on the delivery of projects. With the growing trend of the management by projects approach to the general management of organizations, as a natural response to the fast changing environment, EVM is now on the way to practically all types of industries and organizations. Having been introduced to the Project Management community for a number of decades - initially developed in 1962 as a result of a joint effort between NASA and the US Department of Defense - its practical application was for a long period of time confined to specific industries and types of projects, particularly to the defense sector and to large projects. However, recent developments demonstrate that Earned Value can be used effectively in any type of project and industry sector, ranging from small projects with durations from 1 to 2 months and teams of 1 to 3 persons, to large multi-year complex projects. Along with a growing popularity and awareness, new standards and professional certifications related to Earned Value are now emerging. This industry-wide and universal applicability of EVM raises new challenges to the natural limitations of the method and to the process of organizational adoption, as this implies both analytical improvements in the underlying mathematics and an effective approach to managing the necessary changes in the working culture. Two major challenges facing EVM models are its integration with Risk Management and with Quality Management, as project performance cannot be divorced from the quality of the project results, meeting customer expectations and from effectively managing uncertainty.

The original and current EVM models do not provide a formal integration. Another challenge facing EVM stems from the management by projects model, whereby the core of business strategy shifts from an operations management perspective into an organizational project management competence, which aggregates the two additional disciplines of Program Management and Portfolio Management. With this new model, overall business performance relies on the performance not just of projects but also of programs and portfolios. Initially developed as a tool for measuring performance in projects, Earned Value is now to be evolved to play a similar role in the management of programs and portfolios. In programs, the establishment of new concepts such as the benefits realization baseline and benefits performance indices is required. In portfolios, the integration of EVM project and program models into economic modes and balanced scorecards at the portfolio level is also required. Finally, in a management by projects model, the effective management of human resources cannot be divorced from their role in the performance of projects, programs and portfolios. Both performance appraisal and career path models must take into account the contribution and responsibilities of all stakeholders involved.



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**ALEXANDRE RODRIGUES** is Executive Partner of PMO Projects, an international consulting firm based in Lisbon specialized in Project Management (PM) and delivering advanced PM training and consulting services to clients across Europe and other parts of the world. Throughout his career Alexandre delivered services for a wide range of international organizations, like Volkswagen, Motorola, Microsoft, BHP Billiton in Australia and Africa, NATO in Brussels and Holland, Vodafone in Germany and BAe Systems and GEC-Marconi in the UK. He is also a Senior Consultant with the Cutter Consortium (US), belonging to the Business-IT Alignment and Agile PM Practices, and to the Risk Management Intelligence Network. He has over a decade of teaching experience, having lectured on Project Management and System Dynamics modelling related topics at several universities in Europe. He has supervised several Master and Doctoral students in the area of Project Management. Dr. Rodrigues worked for several years in Project Management for the military and consulting industries in the UK and the US. He has several years of industry experience as a software engineer and publishes regularly articles in business and refereed scientific journals, having presented as a guest speaker at several international conferences. In 1996 he has co-organized a NATO Advanced Research Workshop dedicated to the theme "Managing and Modelling Complex Projects", which took place in Kiev (Ukraine) having gathered a wide range of international experts from the US, Europe and the Eastern block. He was guest Editor of the April 2001 issue of the Cutter IT Journal (Chaired by Edward Yourdon), dedicated to the theme "Multicultural Project Management". He was also invited to publish an article on the 2003/04 Year Book of the Association for Project Management (UK), dedicated to the theme "Earned Value Management in the International Scene. Alexandre Rodrigues holds a five-year "licenciante" degree in Systems and Informatics Engineering and a Ph.D. in Management Sciences specialized in Project Management and System Dynamics. Dr. Rodrigues is an International Correspondent for the international PMForum in Portugal ([www.pmforum.org](http://www.pmforum.org)). He is a member of the Project Management Institute (PMI®) and a certified Project Management Professional (PMP®), and a Chartered Member of the Portuguese Association of Engineering. Alexandre was founding president of the PMI Portugal Chapter and was a PMI Component Mentor for the EMEA region during 2004-2007. He was an active member of the PMI teams that developed the 3rd edition of the PMBOK Guide® and the 1st edition of the OPM3® model for organizational project management maturity assessment. He served for two consecutive years in the Congress Project Action Teams (CoPAT) for the EMEA PMI Global Congresses that took place in Prague (2004) and Edinburgh (2005). In 2009, Alexandre was named PM Ambassador™ in Portugal by the PMForum, having joined the international PM Ambassadors speakers' bureau created by this prestigious international organization. He was invited in late 2009 by the PMI to join the core team developing the second edition of the PMI Practice Standard for Earned Value Management. He was also invited by Gower Publishers to write two books dedicated to the application of Earned Value Management to Projects, Programs and Portfolios, which are forthcoming in early 2011.